

CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1. **(Currently Amended)** A valve body comprising a cartridge with a recess that forms an injection nozzle on one end and a needle that is arranged in the recess and closes the injection nozzle if ~~it a rests with its~~ seat area of the needle rests on a needle seat of the cartridge,

wherein an area of the cartridge adjacent to the needle seat has an inner diameter contour and a cylindrically-shaped outer diameter contour, and the needle has a cylindrically-shaped area adjacent to the seat area, ~~and~~

wherein the cylindrically-shaped outer diameter contour of the cartridge adjacent to the needle seat and the cylindrically-shaped area of the needle have the same outer diameter,

wherein a cross-section the inner diameter contour of the cartridge adjacent the needle seat is curved such that an inner diameter of the cartridge gradually increases in a downstream direction,

wherein a cross-section an outer diameter contour of the needle upstream of the cylindrically-shaped area of the needle is curved such that an outer diameter of the cartridge gradually increases in the downstream direction, and

wherein in a closed position, the seat area of the needle rests directly on the needle seat of the cartridge.

2. (Previously Presented) A valve body according to claim 1, wherein the needle seat and the seat area of the needle are conically shaped.

3. (Previously Presented) A valve body according to claim 1, wherein the cartridge has an area adjacent to the area adjacent to the needle seat wherein the outer diameter of the cartridge is increasing in the direction away from the injection nozzle.

4. (Previously Presented) A fluid injector with a housing, an actuator unit and a valve body according to Claim 1.

5. (Withdrawn) A method for manufacturing a valve body with a cartridge with a recess that forms on one end an injection nozzle, and with a needle that is arranged in the recess and closes the injection nozzle if it rests with its seat area on a needle seat of the cartridge, wherein the area of the cartridge adjacent to the needle seat has a cylindrically-shaped outer contour and the needle has cylindrically-shaped area adjacent to the seat area with the following steps:

inserting the needle in the recess and bringing it to rest with its seat area on the needle seat,

grinding the cylindrically-shaped outer contour of the cartridge and the cylindrically-shaped area of the needle together.

6. (Withdrawn) A method for manufacturing a valve body according to claim 5, wherein the grinding includes a honing process.

7. (Withdrawn) A method for manufacturing a valve body according to claim 5, wherein the grinding includes a lapping process.

8. **(Currently Amended)** A valve body comprising:
a injection nozzle comprising a recess, and
a needle arranged within the recess and being operable to close the injection nozzle
when a seat area of the needle rests ~~resting with its seat area~~ on a needle seat of the
injection nozzle,

wherein an area of the injection nozzle adjacent to the needle seat has an inner
diameter contour and a cylindrically-shaped outer diameter contour, and the needle has a
cylindrically-shaped area adjacent to the seat area, ~~and~~

wherein the cylindrically-shaped outer diameter contour of the injection nozzle
adjacent to the needle seat and the cylindrically-shaped area of the needle have the same
outer diameter,

wherein a cross-section the inner diameter contour of the cartridge adjacent the
needle seat is curved such that an inner diameter of the cartridge gradually increases in
a downstream direction,

wherein a cross-section an outer diameter contour of the needle upstream of the
cylindrically-shaped area of the needle is curved such that an outer diameter of the
cartridge gradually increases in the downstream direction, and

wherein in a closed position, the seat area of the needle rests directly on the
needle seat of the cartridge.

9. **(Previously Presented)** A valve body according to claim 8, wherein the needle
seat and the seat area of the needle are conically shaped.

10. **(Previously Presented)** A valve body according to claim 8, wherein the
injection nozzle comprises an area adjacent to the area adjacent to the needle seat wherein the
outer diameter of the injection nozzle is increasing in the direction away from the injection
nozzle.

11. **(Previously Presented)** A fluid injector with a housing, an actuator unit and a
valve body according to Claim 8.